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EXAMINER

AGGARWAL, YOGESH K

ART UNIT PAPER NUMBER

2615

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4

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/771,741

Applicant(s)

NAKAJIMA, TAKATSUGU

Examiner

Yogesh K Aggarwal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/29/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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***Drawings***

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because of the following informalities:

Page 5, line 20 reads of the present invention should be: "of the conventional example".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Levine (US Patent # 4,739,495).

[Claim 1]

A solid-state image device (figures 1 and 2: 12) in which solid-state image elements of N lines in vertical direction and M pixels in horizontal direction are arranged in a matrix shape (col. 2 lines 65-68, col. 3 lines 1-3), said solid-state image device comprising:

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display means (figure 2: 50) for displaying a position of a defective pixel occurred in said solid-state element on a screen (col. 5 lines 18-25),

position selection means (figure 2: 52) for being manually operated so as to select a position of a defective pixel on a screen of said display means (col. 5 lines 25-29) and

memory means (figure 2: 26) for recording positional information of a defective pixel selected by said position selection means (col. 5 lines 29-35).

[Claim 2]

A solid state image device according to claim 1, wherein said position selection means has, horizontal cursor operated in vertical direction on a screen of said display means, vertical cursor operated in horizontal direction on said screen (col. 5 lines 47-52), and writing determination button (figure 2: 54) operated so as to be pressed at an intersection of said horizontal cursor and vertical cursor (col. 5 lines 25-38).

[Claim 5]

A solid state image device according to claim 1, wherein a case where an operation determining a writing by superimposing an intersection of said horizontal cursor and said vertical cursor on a position of said defective pixel is made as a manual writing mode (col. 5 lines 25-29, col. 5 lines 47-52),

an operation determining a writing by detecting a position of said defective pixel and automatically scanning an acquisition image acquired by said solid-state image element is made as an automated writing mode (col. 7 lines 12-36),

and mode selection means for selecting either of said automated writing mode or said manual writing mode is provided (Col. 7 lines 23-24 teach that the write signal can be automatically

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generated by a switch activated by the capping of the lens corresponding to the automatic mode while the manual mode corresponds to the operator viewing the defective pixel, detecting the position of it and then pressing switch 54 to load the address of the defective pixel into the ROM 26).

[Claim 6]

A solid state image device according to claim 1, wherein a writing area (figures 1 and 2: 26) from first line to the N line is assigned so as to previously write positional information of defective pixels of m pieces portion per one line, and it is performed so that positional information of a defective pixel occurred on the relevant line of said solid state image element is recorded in a writing area corresponding to the relevant line of said memory means (col. 3 lines 49-65).

[Claim 7]

A solid state image device according to claim 1, wherein defect detection means (figure 1: 42) for detecting positional information of a defective pixel occurred on the relevant line of said solid state image element (col. 4 lines 30-42), and information writing and reading means (figure 1: 30) for recording positional information of a defective pixel detected by said defect detection means in a writing area of said memory means corresponding to the relevant line and reading positional information from said writing area are provided (col. 4 lines 8-15).

[Claim 8]

A solid state image device according to claim 1, wherein information rewriting means for deleting positional information of a defective pixel recorded in said memory means and rewriting the relevant positional information is provided (col. 5 lines 3-7 figure 1 teach that the defect

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location memory 26 and defect amplitude memory 28 must be loaded with the defect address and defect amplitude information during the assembly of the camera. Col. 5 lines 18-38 teach that if the operator detects any defects after the previous defects have been stored these defects can be detected they can be rewritten in the corresponding memories 26 and 28).

[Claim 9]

A solid state image device according to claim 1, wherein in said defect detection means, line scanning in turn a solid state image element of N lines and M pixels and measuring luminance by respective solid state image element in a state where an incident light to said solid state image element is intercepted (col. 5 lines 20-25), comparing respective luminance by said solid state image element and reference luminance previously set, and detecting positional information of a defective pixel occurred on the relevant line corresponding to said comparative results (col. 3 lines 65-68, col. 4 lines 1-7).

[Claim 10]

A solid state image device according to claim 1, wherein as for image acquisition information of a solid state image element of a defective pixel recorded in said memory means, at least defect correction means for interpolating image acquisition information of a solid state image element of said defective pixel is provided based on image acquisition information by solid-state image elements in front and in the rear of said defective pixel (col. 3 lines 65-68, col. 4 lines 1-7)[The amplitude level of the dark current of the neighboring pixels is read as interpolating image acquisition information of the defective pixel based on pixels in front and in the rear of said defective pixel].

[Claims 11,12,14]

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These are method claims corresponding to apparatus claims 1, 2 and 6 respectively. Therefore they have been analyzed and rejected based upon claims 1, 2 and 6.

[Claim 13]

This is a method claim corresponding to apparatus claims 8 and 9. Therefore it has been analyzed and rejected based upon claims 8 and 9.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levine (US Patent # 4,739,495) as applied to claim 1 above in view of Gover et al. (US Patent # 4,833,462).

[Claim 3]

Levine teaches a horizontal and vertical cursor but fails to teach "... a horizontal cursor operated in vertical direction on a screen of said display means is displayed in white, and a vertical cursor operated in horizontal direction on said screen is displayed in red, green or blue color". However Gover teaches that these limitations are well known and used in the art (col. 1 lines 28-33).

Therefore taking the combined teachings of Levine and Gover it would have been obvious to one skilled in the art to have been motivated to incorporate a horizontal cursor operated in vertical direction on a screen of said display means is displayed in white, and a vertical cursor operated in horizontal direction on said screen is displayed in red, green or blue color or any other color. The benefit of doing so would be so that the cursor will always contrast with the background

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whatever the color or intensity of the latter might be and therefore becomes easier for the user to identify a particular pixel as taught in Gover (col. 1 lines 31-33).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levine (US Patent # 4,739,495) as applied to claim 1 above in view of Aufrichtig et al. (US Patent # 6,661,456).

[Claim 4]

Levine teaches the position of a defective pixel to be stored in the memory means but fails to teach "... a position of a defective pixel already recorded in said memory means is lighted and displayed in red, green or blue color". However Aufrichtig et al. teaches that this limitation is well known and used in the art (col. 4 lines 4-11)[Figure 7, step 740, col. 6 lines 3-9 teach that these bad pixels can be stored in the storage unit 130]. Therefore taking the combined teachings of Levine and Aufrichtig it would have been obvious to one skilled in the art to have been motivated to incorporate wherein a position of a defective pixel already recorded in said memory means is lighted and displayed in red, green or blue color. The benefit of doing so would be to easily differentiate the pixel defects for each respective color.

Further with regards to the limitation of "a position of a defective pixel about to be recorded in said memory means from now is flickered and displayed in red, green and blue color". Official notice is taken of the fact that in order to further distinguish between a defective pixel about to be stored from a pixel which is already stored it would have been obvious to one skilled in the art to have been motivated to have a position of a defective pixel about to be recorded in said memory means to be flickered and displayed in red, green and blue color.



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***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

i. Imaino et al. (US Patent # 6,704,435).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K Aggarwal whose telephone number is (703) 305-0346. The examiner can normally be reached on M-F 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary Examiner, Ngoc Yen Vu can be reached on (703) 305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA  
May 10, 2004

  
NGOC-YEN VU  
PRIMARY EXAMINER